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**AMENDMENTS TO THE CLAIMS**

Please cancel claims 1-10 and add new claims 11-27 as indicated in the listing of claims below. This listing of claims will replace all prior versions, and listings, of claims in the application.

**LISTING OF CLAIMS**

Claim 1 -10 (canceled)

11. (new) A method for evaluating *in vivo* a test substance for growth of new vascular tissue, comprising the steps of:

- a. providing a rodent pup having a pupillary membrane system in a first eye;
- b. injecting transcorneally a test substance proximate to the pupillary membrane;
- and
- c. examining the pupillary membrane to determine whether new vascular tissue has grown.

12. (new) The method according to claim 11 further comprising a step of comparing the new examined tissue growth with that of a control.

13. (new) The method according to claim 12 wherein the control is the pupillary membrane of the other eye.

14. (new) The method according to Claim 11 wherein the pupillary membrane is harvested and removed from the remainder of the eye prior to the examining step.

15. (new) The method according to claim 14 wherein the examination is by a computer analysis of at least one image of the pupillary membrane system.

16. (new) The method according to claim 11 wherein the examination is by a computer analysis of at least one image of the pupillary membrane system.

17. (new) A method for evaluating *in vivo* a test substance for inhibiting or preventing the growth of new vascular tissue, comprising the steps of:
- a. providing a rodent pup having a pupillary membrane system in a first eye;
  - b. injecting transcorneally proximate to the pupillary membrane a first composition comprising a first substance that can induce new vascular tissue growth;
  - c. injecting transcorneally proximate to the pupillary membrane a second composition comprising an angiogenic regressor test substance; and
  - d. examining the pupillary membrane to determine whether new vascular tissue has grown.
18. (new) The method according to claim 17 wherein the first composition and the second composition are injected simultaneously.
19. (new) The method according to claim 17 further comprising a step of comparing the new examined tissue growth with that of a control.
20. (new) The method according to claim 19 wherein the control is the pupillary membrane of the other eye into which only the first composition is injected.
21. (new) The method according to claim 17 wherein the pupillary membrane is harvested and removed from the remainder of the eye prior to the examining step.
22. (new) The method according to claim 21 wherein the examination is by a computer analysis of at least one image of the pupillary membrane system.
23. (new) A method for evaluating *in vivo* the effect on a property of a capillary vessel structure by a small molecule test substance, comprising the steps of:
- a. providing a rodent pup having a pupillary membrane system in a first eye;
  - b. injecting transcorneally proximate to the pupillary membrane a first composition comprising a small molecule test substance; and

c. examining the pupillary membrane to determine the effect of the small molecule test substance on the property of the capillary vessel structure of the pupillary membrane.

24. (new) The method according to claim 23 wherein the small molecule test substance is selected from the group consisting of a chemical element, a chemical compound, a low molecular weight carbohydrate, a peptide, and mixtures thereof.

25. (new) The method according to claim 23 wherein the property is the elasticity of the capillary vessels.

26. (new) The method according to claim 23 wherein the property is vascular permeability.

27. (new) The method of claim 23 wherein the property of the capillary vessel structure is a problematic vascular condition.